

CLAIMS

1. Lock, especially for vehicles, for locking a movable part such as a pivoting door (41) to a stationary part such as a housing (42),

-- with at least one longitudinally movable (65, 66) locking bar (11, 12), which is driven by an actuator acting by way of a rotor (20);

-- where the locking bar (11, 12), the rotor (20), and an elastic element located in between are designed as a one-piece part;

-- with a longitudinal guide (31, 32) for the locking bar (11, 12); and

-- with a locking opening (43) in the stationary part (42), into which the outer end (13) of the locking bar (12, 13) travels to produce a locking effect, characterized in that

-- the elastic element is formed by the inner section of the locking bar (11, 12) itself and provides a bendable flexing section (15) on the locking bar (11, 12); in that

-- the flexing section (15) is also accommodated in the longitudinal guide (31, 32) of the locking bar (11, 12); in that

-- at least a certain part of this longitudinal guide (31, 32) in the area of the flexing section (15) has a curved course (55) essentially coaxial to the axis of rotation (23) of the rotor (20); and in that

-- the rotor (20) is molded at a circumferential point (21, 22) onto the lateral flank of the flexing section (15) of the locking bar (11, 12).

2. Lock according to Claim 1, characterized in that, in the area of the flexing section (15), the part of the longitudinal guide (31, 32) adjacent to the curved guide piece (55) is essentially tangential (57) to the rotation (25) of the rotor (20)

3. Lock according to Claim 1 or Claim 2, characterized in that at least a certain part of the flexing section (15) is seated tangentially on the free end of the arm (26, 27) of the rotor (20).

4. Lock according to one of Claims 1-3, characterized in that the locking bar or bars (11, 12) have a cranked part (16).

5. Lock according to Claim 4, characterized in that the end (13) of the bar responsible for the locking action extends in a direction which is essentially radial (24) with respect to axis

of rotation (23) of the rotor (20); and in that

-- the locking bar (11, 12) has a central angled section (18), which proceeds at an angle to the longitudinal movement (65, 66) of the bar,

-- which angled section bridges the radial distance (37) to the inner flexing section (15) of the locking bar (11, 12).

6. Lock according to one of Claims 1-5, characterized in that the pivot bearing (35) of the rotor (20) is seated on a carrier (33), and in that the carrier (33) is designed to form a one-piece part with the guide (31, 32) for the locking bar or bars (11, 12).

7. Lock according to Claim 6, characterized in that the pivot bearing of the rotor (20) consists of a bearing pin (35), and in that

-- the bearing pin (35) is designed to form a one-piece part with the carrier and the guide (31, 32).

8. Lock according to one of Claims 1-7, characterized in that the longitudinal guides (11, 12) are designed in the form of channels.

9. Lock according to Claim 8, characterized in that the guide channel (31, 32) extends over essentially the entire length of the locking bar (11, 12), all the way to the outer end

'(13)' responsible for the locking action.

10. Lock according to Claim 9, characterized in that the guide channel (31, 32) has a channel piece (58), which also encloses the angled section (18) of the locking bar (11, 12); and in that

-- this channel piece (58) has an open width (56) which is greater than or equal to the stroke (60) of the locking bar (11, 12) during its longitudinal movement (65, 66).

11. Lock according to Claim 10, characterized in that the lateral channel walls (36) of the channel piece (58) limit the longitudinal stroke (16) of the locking bar or bars (11, 12).

12. Lock according to one of Claims 1-11, characterized in that the longitudinal guides (31, 32) are provided in certain areas with flanges (34), which serve to attach the lock to the movable or resting part (41, 42).

13. Lock according to one of Claims 1-12, characterized in that the lock consists of two structural units (10, 30), which, although consisting of multiple elements, are designed to form a single piece, namely,

-- a movable unit (10), comprising the locking bar or bars (11, 12) with their flexing sections (15), onto which the rotor (20) is molded; and

-- a stationary unit (30), comprising the pivot bearing (35) for the rotor (20); the longitudinal guide or guides (31, 32) for the locking bars (11, 12); and possibly the carrier (33), which is installed between the bars, and the fastening flange (34).

14. Lock according to one of Claims 1-13, characterized in that the locking bar or bars (11, 12) consist of two different materials,

-- where the material in the area of the flexing section or sections (15) is designed to bend more easily than the material of the remaining bar (14).

15. Lock according to one of Claims 1-14, characterized in that the flexing section or sections (15) of the locking bars (11, 12), together with the rigid remaining bar (14) and the rotor (20), are all made of the same material, which is dimensionally stable in and of itself,

-- with the difference that the flexing section or sections (15) have a profiling (46), which makes this area flexible.

16. Lock according to Claim 15, characterized in that the locking bar (11, 12) has a maximum outside profile width (44) in the flexing section (15) which is essentially the same as the width of the rigid sections (14) of the bar; and in that

-- the flexing section (15) has longitudinal profiling (46), which reduces the cross section of the locking bar (11, 12) in certain areas.

17. Lock according to Claim 16, characterized in that, when seen from above, the longitudinal profiling (46) of the flexing sections (15) consists of H-shaped pieces (49) arranged in a row in a polymer-like manner.

18. Lock according to Claim 16 or Claim 17, characterized in that the essentially rigid sections (14) of the locking bar (11, 12) have a fissured cross section (51, 52), which extends uniformly over essentially the entire length of the section.

19. Lock according to Claim 18, characterized in that the fissured cross section has the profile of a cross (51, 52),

-- the ends of the crossbeams being supported against the inside surfaces of the longitudinal guides (31, 32).